



Attorney Docket: 225.48098
PATENT

DAC 13644
#31
P. 4 to
W/D
ab
du

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: PATRICK IZQUIERDO ET AL.
Serial No.: 09/389,386 Group Art Unit: 3644
Filed: SEPTEMBER 3, 1999 Examiner: TRINH T NGUYEN
Title: METHOD FOR SURFACE TREATMENT OF THE INTERIORS
OF ENGINE CYLINDER BORES, AND CYLINDERS MADE BY
SAID METHOD

PETITION FOR WITHDRAWAL OF HOLDING OF
ABANDONMENT UNDER 37 CFR 1.181

Mail Stop Petition

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RECEIVED
SEP 23 2003
GROUP 3600

Sir:

On January 6, 2003, an Office Action was issued for the above-mentioned case. On May 6, 2003, Applicants filed an amendment in reply to the Office Action, including a request for a one-month extension of time and a check for the appropriate extension fee. On August 11, 2003, a Notice of Abandonment was issued which alleged that no reply to the January 6, 2003 Office Action had been received by the Patent Office. Because a reply was timely filed on May 6, 2003, Applicants request withdrawal of the holding of abandonment. Because this petition is being taken from an action of an Examiner during ex parte prosecution of an application, no fee is required. (37 CFR 1.181(a); MPEP 711.03(c)(I))

The following exhibits are submitted in support of the petition for withdrawal of the holding of abandonment:

- 1) A copy of a postcard date-stamped on May 6 by the PTO.
- 2) A copy of an amendment for application serial number 09/389,386, signed on May 6.
- 3) A copy of a signed petition for a one-month extension of time for application serial number 09/389,386.
- 4) A copy of both the front and back of check number 247638 in the amount of \$110.00 made out to the Commissioner of Patents and Trademarks.

The supporting documents listed above demonstrate the following facts:

- a) On May 6, the PTO date-stamped a postcard to indicate receipt of documents. The date-stamped postcard recites delivery of the amendment, petition for a one-month extension of time, and check 247638 listed above in items 2) – 4).
- b) The amendment (exhibit 2) constitutes a complete reply to all outstanding issues raised in the Office Action of January 6, 2003.
- c) In conjunction with the petition for a one-month extension of time (exhibit 3) and check 247638 for \$110.00 (exhibit 4), the amendment constituted a timely filed response to the Office Action of January 6, 2003.

- d) On May 7, the PTO endorsed check 247638 by placing a stamp on the back of the check reading

PATENT AND TRADEMARK OFFICE
13-10-0001
05-07-2003
FOR CREDIT TO THE
U.S. TREASURY

- e) On May 8, check 247638 was cashed, as indicated by the stamp from First Virginia Bank.

The above exhibits demonstrate that the PTO received and cashed the check for a one-month extension recited on the postcard. As indicated in the attached declaration, Crowell and Moring employs detailed procedures for every filing at the PTO. These detailed procedures are designed to ensure that all documents recited on a submission postcard are submitted together. (See Declaration ¶ 2 – 7) Thus, receipt by the PTO of check 247638 on May 6, 2003, as recited on the postcard, demonstrates that the PTO also received the amendment and petition for a one-month extension as recited on the postcard.

The attached exhibits and declaration establish that an amendment was timely filed in response to the Office Action issued on January 6, 2003. As a result, the holding of abandonment based on failure to reply to an Office Action is improper. Applicants respectfully request withdrawal of the holding of abandonment.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038738.48098US).

Respectfully submitted,

September 10, 2003



Donald D. Evenson
Registration No. 39,085

CROWELL & MORING, LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844



Attorney Docket: 225.48098
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: PATRICK IZQUIERDO ET AL.
Serial No.: 09/389,386 Group Art Unit: 3644
Filed: SEPTEMBER 3, 1999 Examiner: TRINH T NGUYEN
Title: METHOD FOR SURFACE TREATMENT OF THE INTERIORS OF
ENGINE CYLINDER BORES, AND CYLINDERS MADE BY SAID
METHOD

DECLARATION IN SUPPORT OF PETITION UNDER 37 CFR 1.181
FOR WITHDRAWAL OF HOLDING OF ABANDONMENT

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Donald D. Evenson, declare the following:

1. I am a citizen of the United States of America.
2. Crowell and Moring LLP follows detailed procedures for every filing at the USPTO. After all of the documents to be submitted are prepared and finalized, including a filing postcard listing the submission documents, the documents requiring execution are signed by the responsible attorney.

3. Copies of the submission documents are then made for the client and the file.

4. When the submission to the USPTO is an amendment, the original set of submission documents (the "filing set"), including the postcard, is reviewed by a second attorney to verify that all of the items recited on the postcard are present and properly signed.

5. After review by the second attorney, the submission documents for the amendment, including the filing postcard, are delivered to the drop-off window at the PTO by courier. At this time, the courier receives back the filing postcard with the date-stamp provided by the PTO to acknowledge receipt.

6. All of the documents listed on the filing postcard were in fact deposited together at the USPTO on May 6, 2003.

7. A copy of the USPTO-stamped filing postcard indicating receipt by the USPTO of the submission documents on May 6, 2003, is attached as Exhibit 1.

8. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful

false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-captioned application or any patent issuing thereon.

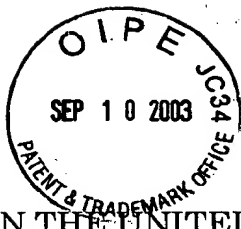
Respectfully submitted,

September 10, 2003



Donald D. Evenson
Registration No. 39,085

CROWELL & MORING, LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844



COPY

Docket No. 225/48098

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: PATRICK IZQUIERDO ET AL.

Serial No.: 09/389,386

Group Art Unit: 3726

Filed: SEPTEMBER 3, 1999

Examiner: Trinh T. Nguyen

Title: METHOD FOR SURFACE TREATMENT OF THE INTERIORS OF
ENGINE CYLINDER BORES, AND CYLINDERS MADE BY SAID
METHOD

RESPONSE

Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated January 6, 2003, please consider the
following.

IN THE CLAIMS:

1-2. (canceled).

3. (previously amended) The method of claim 24, wherein the dry cutting is performed by drilling, brushing, knurling, circular milling or combinations thereof.

4. (previously amended) The method of claim 24, wherein the tool comprises cubic boron nitride, polycrystalline diamond, a coated or uncoated hard metal or a ceramic.

5-9. (canceled).

10. (previously amended) The method of claim 24, wherein the tool is an indexing insert.

11. (previously amended) The method of claim 24, wherein the tool is fitted with a plurality of indexing inserts.

12-23. (canceled).

24. (previously amended) A method of making a cylinder bore in an engine block, comprising:

dry cutting an interior of the cylinder bore without a lubricant using a tool having a surface profile, wherein a portion of a material forming the interior is removed and produces a surface having a defined quality or structure; and

thermally-spraying a layer onto the surface, without prior degreasing or cleaning.

25. (previously amended) A process for surface coating an interior side of a cylinder bore, comprising:

removing a portion of material forming the interior side of the cylinder bore to be coated, thereby creating a surface having at least one of a defined structure or quality; and

directly applying a thermally sprayed tribological layer to the surface, without prior degreasing or cleaning,

wherein the removing comprises dry-cutting without a lubricant in one process step until a roughness value of from 25 to 65 μm is reached, using a cutting tool with a defined surface profile.

26. (previously amended) A process for surface coating an interior side of a cylinder bore, comprising:

removing a portion of a material forming the interior side of the cylinder bore to be coated, thereby creating a surface having at least one of a defined structure or quality; and

directly applying a thermally sprayed tribological layer to the surface, without prior degreasing or cleaning,

wherein the removing comprises dry-cutting without a lubricant in one process step until a roughness value of from 25 to 65 μm is reached, using a cutting tool with an undefined surface profile.

27. (previously amended) A process for surface coating an interior side of a cylinder bore, consisting of:

removing a portion of material forming the interior side of the cylinder bore to be coated, thereby creating a surface having at least one of a defined structure or quality; and

directly applying a thermally sprayed tribological layer to the surface, without prior degreasing or cleaning,

wherein the removing comprises dry-cutting without a lubricant in one process step until a roughness value of from 25 to 65 μm is reached.

REMARKS

Favorable consideration and allowance are respectfully requested for claims 3, 4, 10, 11, and 24-27 in view of the following remarks.

In the Office Action dated January 6, 2003, claims 3, 4, 10, 11, and 24-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,625,465 ("Kirt") in view of U.S. Patent No. 5,691,004 ("Palazzolo"); claims 3, 4, 10, 11, and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,622,753 ("Shepley"); and claims 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shepley. These rejections are respectfully traversed.

Rejection based on Kirt and Palazzolo

According to the Examiner, Kirt fails to disclose "1) thermally spraying a layer to the surface of the hollow body, i.e. engine cylinder bore, without prior degreasing or cleaning and 2) having 'a roughness value of from 25 to 65 um.'" Office Action at 3.

Indeed, Kirt does not teach or suggest any further processing steps subsequent to using a hand-held electric drill connected to a honing tool.

Kirt is silent regarding the claimed roughness value and the limitation "thermally spraying a layer onto the surface, without prior degreasing or cleaning," as is recited in independent claim 24, and "directly applying a thermally sprayed tribological layer to the surface, without prior degreasing or cleaning" as is recited in independent claims 25-27.

As set forth in our last response, Palazzolo does not cure the deficiencies of Kirt. Palazzolo discloses a method of treating a light metal cylinder bore wall to receive a thermally-sprayed metallic coating. Palazzolo's method comprises:

(a) honing the wall . . . , the honing being carried out with the use of a machining coolant to prevent burnishing of the walls; (b) either concurrently or shortly after step (a), washing the honed surface with a hot alkaline solution comprising (i) a non-soaping aluminate agent that produces a protective residue on the walls, and (ii) surfactants that facilitate wetting of the walls even when some steam bubbles may be present; (c) rinsing the washed surfaces without disturbing said residue; and (d) thermally spraying a metallic bond coat on said honed and washed surface to render a [sic] adhesion between said coating and prepared surface that is at least 2800 psi.

Col. 1, l. 60 through col. 2, l. 8 (emphases added). Thus, the surface to be coated is first treated in a cutting manner and employs a coolant to prevent heating up the walls. A dry removal of material, as required by our invention, is therefore not taught by Palazzolo. Thus, any combination of Kirt and Palazzolo would require at least the steps of using a machining coolant, washing with a cleaning solution after roughening, and rinsing the washed surfaces prior to application of a thermally-sprayed layer. The Palazzolo method cannot be said to be without prior degreasing or cleaning. As such, neither Kirt nor Palazzolo teaches or suggests directly applying a thermally-sprayed tribological layer to the surface of the cylinder bore, without cleaning or degreasing. Thus, it would not have been obvious for one of ordinary skill in the art to practice the claimed processes in view of the teachings of Kirt and Palazzolo.

The Examiner states that Palazzolo "teach[es] that after the honing/dry-cutting step the interior surface of the hollow body is thermally sprayed with a coat

in order to increase the wear resistance and the lubricity of the hollow body.” Office Action at 3. By doing so, the Examiner ignores the second part of step (a), above, use of a machining coolant, step (b), above, the washing step, and step (c), above, the rinsing step. Such disregard of the full teachings of a reference is improper.

According to the Federal Circuit (emphasis in original):

It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.

Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443, 448, 230

USPQ2d 416 (Fed. Cir. 1986) (warning against taking a portion of a reference out of context and quoting In re Wesslau, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965)). The Federal Circuit vacated the lower court’s ruling of obviousness and stated that it “failed to consider the [prior art patent] in its entirety and thereby ignored those portions of the reference that argued against obviousness.” Id. Here, the Examiner commits the same error by ignoring the machining coolant, washing and rinsing steps taught by Palazzolo.

The Examiner notes col. 5, lines 38-43, for the proposition that “the step of thermally spraying a layer onto the surface can be done without prior degreasing or cleaning.” Office Action at 3. In the context of this paragraph, Pallazolo teaches that the elimination of certain steps would provide an inferior product, and that, on the other hand, the “use of a washing and residue leaving solution and use of a bond coat create a synergistic adherence effect.” Col. 5, lines 27-28. As such, there is no motivation to conduct a method without the washing and cleaning steps, as

Pallazolo teaches away from these steps and provides evidence of the ineffectiveness of such. Any contrary conclusion is at odds with the above-discussed, Bausch & Lomb holding which insists that a reference's teaching not be taken out of context. Here, Pallazolo discloses not to do what the Examiner concludes would have been obvious. Palazzolo fails to motivate one to employ the claimed invention.

The combination Kirt and Palazzolo do not teach the claimed invention. Withdrawal of the rejection of claims 3, 4, 10, 11, and 24-27 is respectfully requested.

Rejections based on Shepley

Claims 3, 4, 10, 11, and 24-27 were rejected based on Shepley. As set forth in the last response, Shepley discloses a method for cutting and preparing a cylindrical bore surface, having a roughness of from 0.5 to 17mm, onto which a coating is thermally applied. Shepley does not mention that its cutting and coating steps may be performed "without prior degreasing or cleaning" as required by the claimed invention. Indeed, Shepley fails to teach the special advantage of instant invention—that is, the elimination of a lubricant or cooling lubricant. As such, Shepley cannot teach dry cutting without a lubricant and thermally spraying a layer without prior degreasing or cleaning based on silence alone. Furthermore, in 1996, when the application which matured into the Shepley patent was filed, lubricants and cooling lubricants were state of the art methods. Because the state of the art processes utilized lubricants and Shepley is silent on this issue—which is

the very improvement disclosed by applicants—Shepley cannot be interpreted to teach the absence of lubricants, degreasing or cleaning. Such an interpretation is not supported by Shepley or the state of the art in at the time the Shepley patent was filed.

CONCLUSION

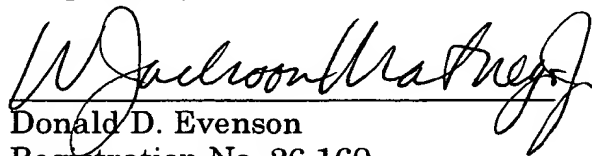
In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response; please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #225/48098).

May 6, 2003

Respectfully submitted,



Donald D. Evenson
Registration No. 26,160
W. Jackson Matney, Jr.
Registration No. 39,292

CROWELL & MORING LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

COPY

crowell moring

1001 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, D.C. 20004-2595

SUNTRUST
Washington, DC

65-270/550

247638

Check Date

05/06/03

Amount

\$ 110.00*****

Pay: ONE HUNDRED TEN AND 00/100 USD

TO
THE
ORDER
OF

Commissioner of Patents and Trademarks

Washington
DC

20231


Authorized Signature

⑈ 247638 ⑈ ⑆ 055002707⑆ ⑆ 0000004897806 ⑈

⑈ 000000 ⑆ 1000 ⑈



SUNTRUST BLT 05062003

1407-001 051000020

4800417191

MAY - 8 03

⑈ 056001118 ⑈
FIRST VIRGINIA BANK
05062003 FALLS CHURCH, VA

01297100

U019

93591

PATENT AND TRADEMARK OFFICE
13-10-0001
05-07-2003
FOR CREDIT TO THE
U.S. TREASURY

COPY



Attorney Docket: 225/48098
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: PATRICK IZQUIERDO ET AL.

Serial No.: 09/389,386

Group Art Unit: 3726

Filed: SEPTEMBER 3, 1999

Examiner: Trinh T. Nguyen

Title: METHOD FOR SURFACE TREATMENT OF THE INTERIORS OF
ENGINE CYLINDER BORES, AND CYLINDERS MADE BY SAID
METHOD

PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136(a)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant hereby requests that the period to take action in the above-captioned application be extended by 1 month pursuant to the provisions of 37 C.F.R. 1.136(a).

A check in the amount of \$110.00 is submitted herewith in payment of the required extension fee. This amount is believed to be correct, however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323 (Docket # 225/48098). A duplicate copy of this letter is attached.

May 6, 2003

Respectfully submitted,

Donald D. Evenson
Registration No. 26,160
W. Jackson Matney, Jr.
Registration No. 39,292

CROWELL & MORING LLP
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844



COPY

10

FILED WITH FEES UNDER 37 C.F.R. §1.53

PATENT

Att'y Docket: 225/48098
Inventor(s): PATRICK IZQUIERDO ET AL.
Serial No.: 09/389,386
Filing Date: September 3, 1999

Today's Date: May 6, 2003

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

- ☒ Response
- ☒ Petition for Extension of Time Under 37 C.F.R. 1.136(a) (1 month)
- ☒ Check No. 247638 in the amount of \$110.00 for the 1mth extension of time

DUE DATE May 6, 2003

DDE/WJM:klh



CROWELL & MORING, LLP
P.O. Box 14300
WASHINGTON, D.C. 20044-4300
TEL: (202) 624-2500

038738.48098US